

Project Description

This project involves reconstruction of the existing Traffic Control Signal at the intersection of US 40 and Middle River Road in Baltimore County. US 40 is assumed to run in an east/west direction.

Controller Operation

A new eight-phase fully actuated, solid state digital NEMA controller with telemetry module and harness, battery back-up, and video detection equipment housed in a NEMA 6 base mounted cabinet is to be installed at this location.

The intersection is to operate in a NEMA eight (8) phase fully actuated mode. The US 40 approaches shall operate with concurrent exclusive left turn movements and concurrent through movements. The Middle River approaches shall operate with E/P phasing for both approaches.

CONTACT PERSONS FOR DISTRICT 4:

MR. DAVID MALKOWSKI
METROPOLITAN DISTRICT ENGINEER
410-321-2810

MR. RANDALL SCOTT
ASSISTANT DISTRICT ENGINEER - TRAFFIC
410-321-2798

MR. GRANDON TOBERY
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
410-321-2821

MR. DAVE RAMSEY
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
410-321-2761

MR. JOSEPH McMAHON
ASSISTANT DISTRICT ENGINEER - UTILITIES
410-321-2841

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY:

MR. RICHARD DAFF SR.
CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS
410-787-7630

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
410-787-7650

MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
410-787-7676

MR. DAVE SCHWARTZ
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)
410-787-7668

Equipment List

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

ITEM NO.	QUANTITY	DESCRIPTION
9086	1 EA	CABINET W/ TELEMETRY (SYSTEM CAB) SIZE 6
9087	1 EA	CONTROLLER ASC II W/ TELEMETRY
9089	98 SF	FLAT SHEET ALUM SIGN-YELLOW, ORANGE, & SILVER (SF) 2 EA. R10-12 "LEFT TURN YIELD ON GREEN" 36"x42" MAST ARM MNT. 2 EA. R3-5L "LEFT TURN ONLY" SYMBOL 30"x36" MAST ARM MNT. 1 EA. R3-5R "RIGHT TURN ONLY" SYMBOL 30"x36" MAST ARM MNT. 2 EA. ASSOCIATED SHIELD ASSEMBLY 36"x75" POLE MNT. 2 EA. ASSOCIATED SHIELD ASSEMBLY 24"x51" POLE MNT.
9090	8 SF	FLAT SHEET ALUM. SIGN BLUE OR GREEN 2 EA. D-3(1) "Middle River Rd." Var X 16" MAST ARM MNT.

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2001	3 CY	TEST PIT EXCAVATION
8001	20 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8016	2 EA	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 500 FOOT LEAD-IN
8017	2 EA	FURNISH AND INSTALL MICROLOOP PROBE SET WITH 1000 FOOT LEAD-IN
8020	1 EA	INSTALL CONTROLLER AND CABINET - BASE MOUNT
8021	290 LF	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
8022	20 LF	LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR LOOP DETECTOR LEAD-IN
8024	520 LF	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8026	520 LF	FURNISH AND INSTALL 2 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
8027	60 LF	FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8031	40 LF	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
8032	330 LF	FURNISH AND INSTALL 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
8033	8 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8034	5 EA	FURNISH AND INSTALL GROUND ROD 3/4 INCH DIAMETER X 10 FOOT LENGTH
8040	490 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)
8041	1320 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (ALUMINUM SHIELDED)
8044	85 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8045	2400 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO 14 AWG)
8046	435 LF	FURNISH AND INSTALL ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 AWG) TYPE T/C
8048	450 LF	FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8049	270 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 4 AWG - THHN/THWN
8053	106 SF	INSTALL OVERHEAD SIGN
8055	2 EA	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCCELL
8056	2 EA	FURNISH AND INSTALL 15 FOOT LIGHTING BRACKET ARM FOR TRAFFIC SIGNAL STRUCTURE
8057	5 EA	REMOVE AND DISPOSE OF EXISTING FOUNDATION 12 INCHES BELOW GRADE
8059	1 EA	DELIVERY OF REMOVED CONTROLLER AND CABINET
8060	1 EA	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
8066	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT (120/240 V, 1 PHASE 3 WIRE SYSTEM)
8077	1 EA	FURNISH AND INSTALL MAST ARM POLE AND 50 FOOT MAST ARM W/ 13/4"x90" ANCHOR BOLTS
8078	2 EA	FURNISH AND INSTALL MAST ARM POLE AND 60 FOOT MAST ARM W/ 2"x90" ANCHOR BOLTS
8079	1 EA	FURNISH AND INSTALL MAST ARM POLE AND 70 FOOT MAST ARM W/ 2"x90" ANCHOR BOLTS
8084	46 EA	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
8085	6 EA	FURNISH AND INSTALL 8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
NEG	4 EA	FURNISH AND INSTALL VIDEO TRAFFIC DETECTION SYSTEM
NEG	4 EA	FURNISH AND INSTALL CAMERA CONTROL CABLE, 250 FOOT ASSEMBLY

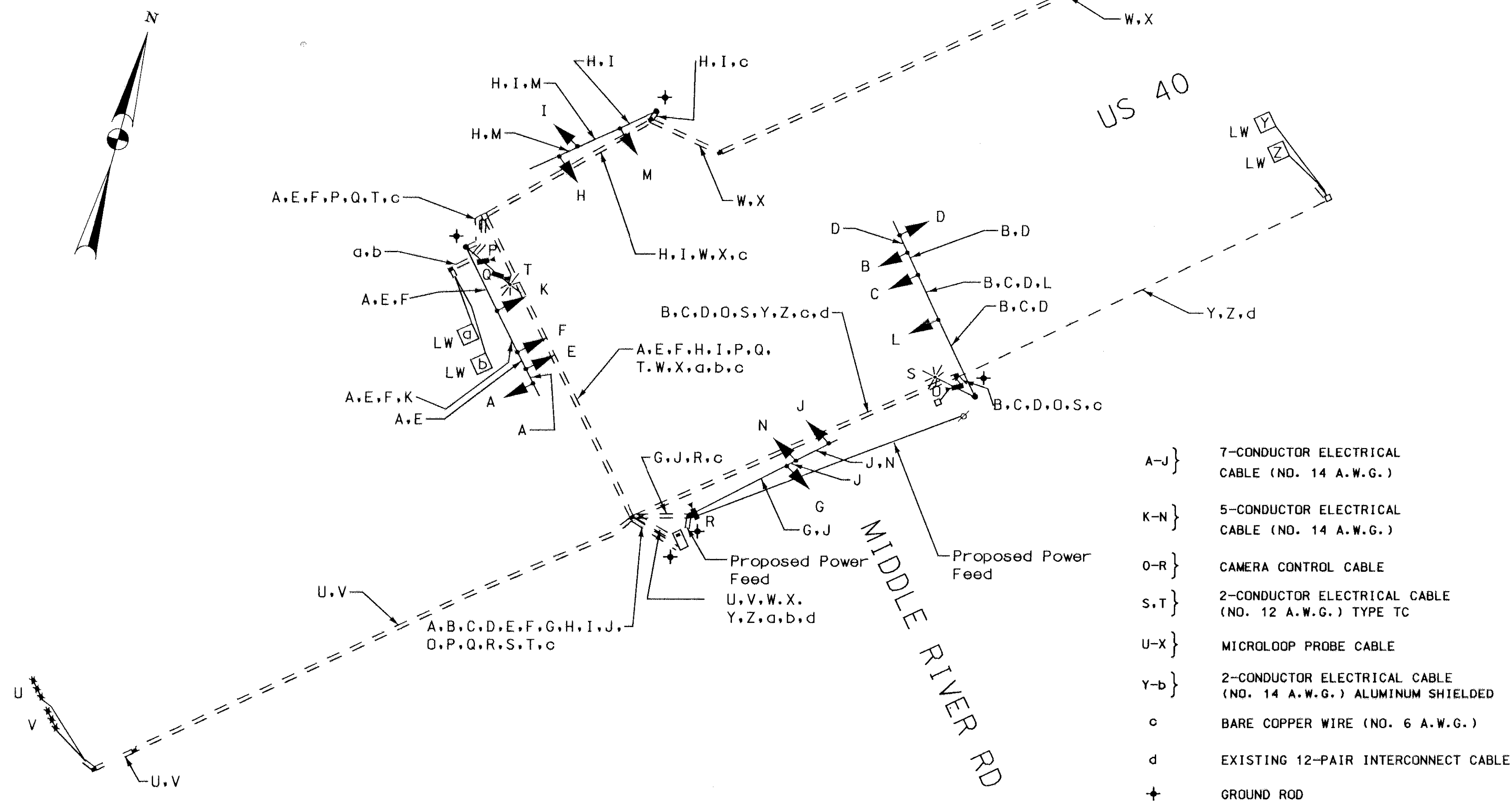
C. MATERIAL TO BE REMOVED AND RETURNED TO SHA

QUANTITY	DESCRIPTION
1 EA	DELIVERY OF REMOVED CONTROLLER AND CABINET

NOTE: ALL OTHER EQUIPMENT WILL BE THE PROPERTY OF THE CONTRACTOR

Phase Chart

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Phase 1 & 5	←G-←	←G-←	R	R	←G-←	←G-←	R	R	R	R	R-G→	R	R	R
1 & 5 Change	←G-←	←G-←	G	G	←R-←	←R-←	R	R	R	R	R-R→	R	R	R
Phase 1 & 6	←Y-←	←Y-←	G	G	←R-←	←R-←	R	R	R	R	R-R→	R	R	R
1 & 6 Change	←Y-←	←Y-←	G	G	←R-←	←R-←	R	R	R	R	R-R→	R	R	R
Phase 2 & 5	←R-←	←R-←	R	R	←G-←	←G-←	G	G	R	R	R-G→	R	R	R
2 & 5 Change	←R-←	←R-←	R	R	←Y-←	←Y-←	G	G	R	R	R-Y→	R	R	R
Phase 2 & 6	R	R	G	G	R	R	G	G	R	R	R	R	R	R
2 & 6 Change	R	R	Y	Y	R	R	Y	Y	R	R	R	R	R	R
Phase 3 & 7	R	R	R	R	R	R	R	R	←G-R	←G-R	R	←G-R	←G-R	R
3 & 7 Change														
Phase 3 & 8	R	R	R	R	R	R	R	R	←G-G	←G-G	G	R	R	R
3 & 8 Change	R	R	R	R	R	R	R	R	←Y-G	←Y-G	G	R	R	R
Phase 4 & 7	R	R	R	R	R	R	R	R	R	R	R	←G-G	←G-G	G
4 & 7 Change	R	R	R	R	R	R	R	R	R	R	R	←Y-G	←Y-G	G
Phase 4 & 8	R	R	R	R	R	R	R	R	G	G	G	G	G	G
4 & 8 Change	R	R	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y
Flashing Operation	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION

Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

GENERAL INFORMATION

US 40 (PULASKI HIGHWAY) AND MIDDLE RIVER ROAD
MIDDLE RIVER, MARYLAND

CENTURY ENGINEERING, INC.
CONSULTING ENGINEERS - PLANNERS
32 WEST ROAD
TOWSON, MARYLAND 21204

DRAWN BY: L.T. & B.T.
CHECKED BY: [Signature]
SCALE: 1" = 20'
DATE: 7-20-72

F.A.P. NO. T-8007(19)
S.H.A. NO. B-284-485
COUNTY: BALTIMORE
LOG MILE: 03004089J3

TS NO. 628 E
T.J.M.S. NO. E435

SHEET NO. 2 OF 2

01:TRANSWDG#97006*58*086gp06.dgn

04 JUN 2001